



**STATE OF TENNESSEE
DEPARTMENT OF HEALTH
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL
Lab Services - Jackson Regional Lab
Jackson, TN 38301
731-426-0686

TDH: Lab Services KRL
Lab Services - Knoxville Regional Lab
Knoxville, TN 37920
865-549-5201

TDH: Lab Services NCL
Lab Services - Nashville Central Lab
Nashville, TN 37243
615-262-6300

Sent To: Greg Denton
TDEC-WPC
6th Floor, L & C Tower Annex
401 Church Street
Nashville, TN 37243-1534

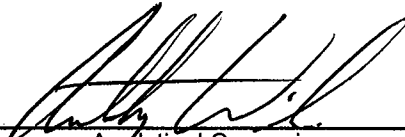
Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00003211
Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code: 327.34-20

This is to certify that the following results were determined using
good laboratory practices and in accordance with federal or state
approved methodologies.



Analytical Supervisor

Lab-Sample Number: K00003211001
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA ash spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 12/15/2009 09:53
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.74 pH Units
Chlorine, residual:
Conductivity: 35 uMHO
Temperature: 8.35
Dissolved Oxygen: 15.11 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 12/16/2009 | | | | M Pattanayek | 12/16/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 460 | µg/L | 2.9 | 10 | A Bass | 12/29/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 300 | µg/L | 6.4 | 10 | M Pattanayek | 12/18/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 12/18/2009 |
| Arsenic | U | µg/L | 0.93 | 5 | M Pattanayek | 12/18/2009 |
| Barium | 23 | µg/L | 2.5 | 5 | M Pattanayek | 12/18/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 12/18/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 12/18/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 12/18/2009 |
| Cobalt | 0.36J | µg/L | 0.04 | 1 | M Pattanayek | 12/18/2009 |
| Copper | 0.39J | µg/L | 0.38 | 1 | M Pattanayek | 12/18/2009 |
| Lead | 0.46J | µg/L | 0.10 | 1 | M Pattanayek | 12/18/2009 |
| Manganese | 36 | µg/L | 0.42 | 1 | M Pattanayek | 12/18/2009 |
| Nickel | 1.2 | µg/L | 0.25 | 1 | M Pattanayek | 12/18/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 12/18/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 12/18/2009 |
| Thallium | 0.10J | µg/L | 0.03 | 1 | M Pattanayek | 12/18/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 12/18/2009 |
| Zinc | 3.1J | µg/L | 1.9 | 5 | M Pattanayek | 12/18/2009 |

Lab-Sample Number: K00003211001
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA ash spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 12/15/2009 09:53
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.74 pH Units
Chlorine, residual:
Conductivity: 35 uMHO
Temperature: 8.35
Dissolved Oxygen: 15.11 mg/L
Other:
Flow: CFS

| TEST: Mercury | | METHOD: EPA 245.1 | | | | | |
|---------------|--------|-------------------|-------|-----|--------------|------------|--|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE | |
| Mercury | U | µg/L | 0.029 | 0.2 | M Pattanayek | 12/21/2009 | |

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00003211002
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA ash spill
Project Site No.: 2B
Station No.: EMORY001.9RO
Date/Time Collected: 12/15/2009 10:05
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.19 pH Units
Chlorine, residual:
Conductivity: 35 uMHO
Temperature: 8.05
Dissolved Oxygen: 15.46 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 12/16/2009 | | | | M Pattanayek | 12/16/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 410 | µg/L | 2.9 | 10 | A Bass | 12/29/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 340 | µg/L | 6.4 | 10 | M Pattanayek | 12/18/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 12/18/2009 |
| Arsenic | 1.8J | µg/L | 0.93 | 5 | M Pattanayek | 12/18/2009 |
| Barium | 25 | µg/L | 2.5 | 5 | M Pattanayek | 12/18/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 12/18/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 12/18/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 12/18/2009 |
| Cobalt | 0.39J | µg/L | 0.04 | 1 | M Pattanayek | 12/18/2009 |
| Copper | 0.45J | µg/L | 0.38 | 1 | M Pattanayek | 12/18/2009 |
| Lead | 0.56J | µg/L | 0.10 | 1 | M Pattanayek | 12/18/2009 |
| Manganese | 35 | µg/L | 0.42 | 1 | M Pattanayek | 12/18/2009 |
| Nickel | 1.3 | µg/L | 0.25 | 1 | M Pattanayek | 12/18/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 12/18/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 12/18/2009 |
| Thallium | 0.075J | µg/L | 0.03 | 1 | M Pattanayek | 12/18/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 12/18/2009 |
| Zinc | 3.0J | µg/L | 1.9 | 5 | M Pattanayek | 12/18/2009 |

Lab-Sample Number: K00003211002
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA ash spill
Project Site No.: 2B
Station No.: EMORY001.9RO
Date/Time Collected: 12/15/2009 10:05
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.19 pH Units
Chlorine, residual:
Conductivity: 35 uMHO
Temperature: 8.05
Dissolved Oxygen: 15.46 mg/L
Other:
Flow: CFS

| TEST: Mercury | | METHOD: EPA 245.1 | | | | |
|---------------|--------|-------------------|-------|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Mercury | U | µg/L | 0.029 | 0.2 | M Pattanayek | 12/21/2009 |

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00003211003
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA ash spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 12/15/2009 10:16
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 6.96 pH Units
Chlorine, residual:
Conductivity: 34 uMHO
Temperature: 8.02
Dissolved Oxygen: 15.38 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 12/16/2009 | | | | M Pattanayek | 12/16/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 480 | µg/L | 2.9 | 10 | A Bass | 12/29/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 350 | µg/L | 6.4 | 10 | M Pattanayek | 12/18/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 12/18/2009 |
| Arsenic | 1.3J | µg/L | 0.93 | 5 | M Pattanayek | 12/18/2009 |
| Barium | 26 | µg/L | 2.5 | 5 | M Pattanayek | 12/18/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 12/18/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 12/18/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 12/18/2009 |
| Cobalt | 0.41J | µg/L | 0.04 | 1 | M Pattanayek | 12/18/2009 |
| Copper | U | µg/L | 0.38 | 1 | M Pattanayek | 12/18/2009 |
| Lead | 0.55J | µg/L | 0.10 | 1 | M Pattanayek | 12/18/2009 |
| Manganese | 40 | µg/L | 0.42 | 1 | M Pattanayek | 12/18/2009 |
| Nickel | 1.3 | µg/L | 0.25 | 1 | M Pattanayek | 12/18/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 12/18/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 12/18/2009 |
| Thallium | 0.062J | µg/L | 0.03 | 1 | M Pattanayek | 12/18/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 12/18/2009 |
| Zinc | 2.9J | µg/L | 1.9 | 5 | M Pattanayek | 12/18/2009 |

Lab-Sample Number: K00003211003
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA ash spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 12/15/2009 10:16
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 6.96 pH Units
Chlorine, residual:
Conductivity: 34 uMHO
Temperature: 8.02
Dissolved Oxygen: 15.38 mg/L
Other:
Flow: CFS

| TEST: Mercury | | METHOD: EPA 245.1 | | | | | |
|---------------|--------|-------------------|-------|-----|--------------|------------|--|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE | |
| Mercury | 0.090J | µg/L | 0.029 | 0.2 | M Pattanayek | 12/21/2009 | |

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00003211004
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA ash spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 12/15/2009 10:26
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.08 pH Units
Chlorine, residual:
Conductivity: 34 uMHO
Temperature: 7.95
Dissolved Oxygen: 15.14 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 12/16/2009 | | | | M Pattanayek | 12/16/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 580 | µg/L | 2.9 | 10 | A Bass | 12/29/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 470 | µg/L | 6.4 | 10 | M Pattanayek | 12/21/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 12/18/2009 |
| Arsenic | 1.1J | µg/L | 0.93 | 5 | M Pattanayek | 12/18/2009 |
| Barium | 26 | µg/L | 2.5 | 5 | M Pattanayek | 12/18/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 12/18/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 12/18/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 12/18/2009 |
| Cobalt | 0.45J | µg/L | 0.04 | 1 | M Pattanayek | 12/18/2009 |
| Copper | 0.61J | µg/L | 0.38 | 1 | M Pattanayek | 12/18/2009 |
| Lead | 0.67J | µg/L | 0.10 | 1 | M Pattanayek | 12/18/2009 |
| Manganese | 37 | µg/L | 0.42 | 1 | M Pattanayek | 12/18/2009 |
| Nickel | 1.3 | µg/L | 0.25 | 1 | M Pattanayek | 12/18/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 12/18/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 12/18/2009 |
| Thallium | 0.052J | µg/L | 0.03 | 1 | M Pattanayek | 12/18/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 12/18/2009 |
| Zinc | 3.1J | µg/L | 1.9 | 5 | M Pattanayek | 12/18/2009 |

Lab-Sample Number: K00003211004
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA ash spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 12/15/2009 10:26
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.08 pH Units
Chlorine, residual:
Conductivity: 34 uMHO
Temperature: 7.95
Dissolved Oxygen: 15.14 mg/L
Other:
Flow: CFS

| TEST: Mercury | | METHOD: EPA 245.1 | | | | | |
|---------------|--------|-------------------|-------|-----|--------------|------------|--|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE | |
| Mercury | U | µg/L | 0.029 | 0.2 | M Pattanayek | 12/21/2009 | |

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00003211005
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 2.3
Sampler Project Name: TVA ash spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 12/15/2009 10:44
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.58 pH Units
Chlorine, residual:
Conductivity: 146 uMHO
Temperature: 9.16
Dissolved Oxygen: 12.91 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | | METHOD: EPA 200.2 | | | |
|------------------------|------------|-------|-------------------|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 12/16/2009 | | | | M Pattanayek | 12/16/2009 |

| TEST: ICP | | | METHOD: EPA 200.7 | | | |
|-----------|--------|-------|-------------------|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 520 | µg/L | 2.9 | 10 | A Bass | 12/29/2009 |

| TEST: ICP-MS | | | METHOD: EPA 200.8 | | | |
|--------------|--------|-------|-------------------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 280 | µg/L | 6.4 | 10 | M Pattanayek | 12/21/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 12/18/2009 |
| Arsenic | U | µg/L | 0.93 | 5 | M Pattanayek | 12/18/2009 |
| Barium | 31 | µg/L | 2.5 | 5 | M Pattanayek | 12/18/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 12/18/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 12/18/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 12/18/2009 |
| Cobalt | 0.36J | µg/L | 0.04 | 1 | M Pattanayek | 12/18/2009 |
| Copper | 0.48J | µg/L | 0.38 | 1 | M Pattanayek | 12/18/2009 |
| Lead | 0.69J | µg/L | 0.10 | 1 | M Pattanayek | 12/18/2009 |
| Manganese | 61 | µg/L | 0.42 | 1 | M Pattanayek | 12/18/2009 |
| Nickel | 1.3 | µg/L | 0.25 | 1 | M Pattanayek | 12/18/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 12/18/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 12/18/2009 |
| Thallium | 0.035J | µg/L | 0.03 | 1 | M Pattanayek | 12/18/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 12/18/2009 |
| Zinc | 2.7J | µg/L | 1.9 | 5 | M Pattanayek | 12/18/2009 |

Lab-Sample Number: K00003211005
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 2.3
Sampler Project Name: TVA ash spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 12/15/2009 10:44
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.58 pH Units
Chlorine, residual:
Conductivity: 146 uMHO
Temperature: 9.16
Dissolved Oxygen: 12.91 mg/L
Other:
Flow: CFS

| TEST: Mercury | | METHOD: EPA 245.1 | | | | |
|---------------|--------|-------------------|-------|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Mercury | U | µg/L | 0.029 | 0.2 | M Pattanayek | 12/21/2009 |

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00003211006
Project Name: TVA-Ash Spill
Sample Description: Clinch River TVA Discharge Point
Sampler Project Name: TVA ash spill
Project Site No.: 5A
Station No.: KingAshOutF2
Date/Time Collected: 12/15/2009 10:50
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.68 pH Units
Chlorine, residual:
Conductivity: 47 uMHO
Temperature: 6.83
Dissolved Oxygen: 16.79 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 12/16/2009 | | | | M Pattanayek | 12/16/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 440 | µg/L | 2.9 | 10 | A Bass | 12/29/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 300 | µg/L | 6.4 | 10 | M Pattanayek | 12/21/2009 |
| Antimony | 0.55J | µg/L | 0.33 | 1 | M Pattanayek | 12/18/2009 |
| Arsenic | 5.1 | µg/L | 0.93 | 5 | M Pattanayek | 12/18/2009 |
| Barium | 33 | µg/L | 2.5 | 5 | M Pattanayek | 12/18/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 12/18/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 12/18/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 12/18/2009 |
| Cobalt | 0.36J | µg/L | 0.04 | 1 | M Pattanayek | 12/18/2009 |
| Copper | 1.4 | µg/L | 0.38 | 1 | M Pattanayek | 12/18/2009 |
| Lead | 0.51J | µg/L | 0.10 | 1 | M Pattanayek | 12/18/2009 |
| Manganese | 47 | µg/L | 0.42 | 1 | M Pattanayek | 12/18/2009 |
| Nickel | 1.2 | µg/L | 0.25 | 1 | M Pattanayek | 12/18/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 12/18/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 12/18/2009 |
| Thallium | 0.079J | µg/L | 0.03 | 1 | M Pattanayek | 12/18/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 12/18/2009 |
| Zinc | 3.1J | µg/L | 1.9 | 5 | M Pattanayek | 12/18/2009 |

Lab-Sample Number: K00003211006
Project Name: TVA-Ash Spill
Sample Description: Clinch River TVA Discharge Point
Sampler Project Name: TVA ash spill
Project Site No.: 5A
Station No.: KingAshOutF2
Date/Time Collected: 12/15/2009 10:50
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.68 pH Units
Chlorine, residual:
Conductivity: 47 uMHO
Temperature: 6.83
Dissolved Oxygen: 16.79 mg/L
Other:
Flow: CFS

| TEST: Mercury | | METHOD: EPA 245.1 | | | | |
|---------------|--------|-------------------|-------|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Mercury | 0.034J | µg/L | 0.029 | 0.2 | M Pattanayek | 12/21/2009 |

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

| | | | |
|------------------------------|---|-----------------------------|--------------------|
| Lab-Sample Number: | K00003211007 | Field Determinations | |
| Project Name: | TVA-Ash Spill | pH: | 7.64 pH Units |
| Sample Description: | Clinch River mile 4.5 near Sugar Grove Valley R | Chlorine, residual: | |
| Sampler Project Name: | TVA ash spill | Conductivity: | 182 uMHO |
| Project Site No.: | 6 | Temperature: | 9.68 |
| Station No.: | CLINC004.5RO | Dissolved Oxygen: | 12.25 mg/L |
| Date/Time Collected: | 12/15/2009 10:33 | Other: | |
| Sampler's Name: | Brandy Long | Flow: | CFS |
| County: | ROANE - 73 | | |
| Sample Matrix: | Water | | |
| EFO: | Knoxville | | |
| Sampling Agency: | TDEC-WPC | | |
| Billing Code: | 327.34-20 | | |
| Send Report To: | TDEC-WPC | | |
| Agency Invoiced: | TDEC-WPC | | |
| Priority Date: | 12/31/2009 | | |
| Date/Time Received: | 12/15/2009 14:00 | | |
| Received By: | Ken Hitchman | | |

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 12/16/2009 | | | | M Pattanayek | 12/16/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 590 | µg/L | 2.9 | 10 | A Bass | 12/29/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 330 | µg/L | 6.4 | 10 | M Pattanayek | 12/21/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 12/18/2009 |
| Arsenic | U | µg/L | 0.93 | 5 | M Pattanayek | 12/18/2009 |
| Barium | 34 | µg/L | 2.5 | 5 | M Pattanayek | 12/18/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 12/18/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 12/18/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 12/18/2009 |
| Cobalt | 0.37J | µg/L | 0.04 | 1 | M Pattanayek | 12/18/2009 |
| Copper | U | µg/L | 0.38 | 1 | M Pattanayek | 12/18/2009 |
| Lead | 0.67J | µg/L | 0.10 | 1 | M Pattanayek | 12/18/2009 |
| Manganese | 60 | µg/L | 0.42 | 1 | M Pattanayek | 12/18/2009 |
| Nickel | 1.4 | µg/L | 0.25 | 1 | M Pattanayek | 12/18/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 12/18/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 12/18/2009 |
| Thallium | U | µg/L | 0.03 | 1 | M Pattanayek | 12/18/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 12/18/2009 |
| Zinc | 2.8J | µg/L | 1.9 | 5 | M Pattanayek | 12/18/2009 |

| | | | |
|------------------------------|---|-----------------------------|---------------|
| Lab-Sample Number: | K00003211007 | Field Determinations | |
| Project Name: | TVA-Ash Spill | pH: | 7.64 pH Units |
| Sample Description: | Clinch River mile 4.5 near Sugar Grove Valley R | Chlorine, residual: | |
| Sampler Project Name: | TVA ash spill | Conductivity: | 182 uMHO |
| Project Site No.: | 6 | Temperature: | 9.68 |
| Station No.: | CLINC004.5RO | Dissolved Oxygen: | 12.25 mg/L |
| Date/Time Collected: | 12/15/2009 10:33 | Other: | |
| Sampler's Name: | Brandy Long | Flow: | CFS |
| County: | ROANE - 73 | | |
| Sample Matrix: | Water | | |
| EFO: | Knoxville | | |
| Sampling Agency: | TDEC-WPC | | |
| Billing Code: | 327.34-20 | | |
| Send Report To: | TDEC-WPC | | |
| Agency Invoiced: | TDEC-WPC | | |
| Priority Date: | 12/31/2009 | | |
| Date/Time Received: | 12/15/2009 14:00 | | |
| Received By: | Ken Hitchman | | |

| TEST: Mercury | | METHOD: EPA 245.1 | | | | |
|---------------|--------|-------------------|-------|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Mercury | U | µg/L | 0.029 | 0.2 | M Pattanayek | 12/21/2009 |

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected



**STATE OF TENNESSEE
DEPARTMENT OF HEALTH
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL
Lab Services - Jackson Regional Lab
Jackson, TN 38301
731-426-0686

TDH: Lab Services KRL
Lab Services - Knoxville Regional Lab
Knoxville, TN 37920
865-549-5201

TDH: Lab Services NCL
Lab Services - Nashville Central Lab
Nashville, TN 37243
615-262-6300

Sent To: Greg Denton
TDEC-WPC
6th Floor, L & C Tower Annex
401 Church Street
Nashville, TN 37243-1534

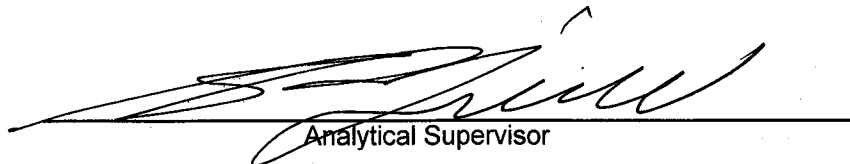
Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00003211
Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code: 327.34-20

This is to certify that the following results were determined using
good laboratory practices and in accordance with federal or state
approved methodologies.


Analytical Supervisor

Lab-Sample Number: K00003211001
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA ash spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 12/15/2009 09:53
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.74 pH Units
Chlorine, residual:
Conductivity: 35 uMHO
Temperature: 8.35
Dissolved Oxygen: 15.11 mg/L
Other:
Flow: CFS

| TEST: Alkalinity, Total | | METHOD: EPA 310.2 | | | | |
|-------------------------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Alkalinity | 11 | mg/L | 3.8 | 10 | M Chen | 12/22/2009 |

| TEST: Hardness, Calcium | | METHOD: SM 3500-Ca D | | | | |
|-------------------------|--------|----------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Calcium hardness | 12 | mg/L | 0.7 | 1 | M Chen | 12/21/2009 |

| TEST: Residue, Settleable | | METHOD: SM 2540F | | | | |
|---------------------------|--------|------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Settleable Residue | U | ml/L | 0.10 | 0.10 | P Leathers | 12/16/2009 |

| TEST: Residue, Suspended | | METHOD: SM 2540D | | | | |
|--------------------------|--------|------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Suspended Solids | 13 | mg/L | 10 | 10 | A Peeples | 12/18/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00003211002
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA ash spill
Project Site No.: 2B
Station No.: EMORY001.9RO
Date/Time Collected: 12/15/2009 10:05
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations

pH: 7.19 pH Units
Chlorine, residual:
Conductivity: 35 uMHO
Temperature: 8.05
Dissolved Oxygen: 15.46 mg/L
Other:
Flow: CFS

| TEST: Alkalinity, Total | | METHOD: EPA 310.2 | | | | |
|-------------------------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Alkalinity | 12 | mg/L | 3.8 | 10 | M Chen | 12/22/2009 |

| TEST: Hardness, Calcium | | METHOD: SM 3500-Ca D | | | | |
|-------------------------|--------|----------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Calcium hardness | 12 | mg/L | 0.7 | 1 | M Chen | 12/21/2009 |

| TEST: Residue, Settleable | | METHOD: SM 2540F | | | | |
|---------------------------|--------|------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Settleable Residue | U | ml/L | 0.10 | 0.10 | P Leathers | 12/16/2009 |

| TEST: Residue, Suspended | | METHOD: SM 2540D | | | | |
|--------------------------|--------|------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Suspended Solids | 23 | mg/L | 10 | 10 | A Peebles | 12/18/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00003211003
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA ash spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 12/15/2009 10:16
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 6.96 pH Units
Chlorine, residual:
Conductivity: 34 uMHO
Temperature: 8.02
Dissolved Oxygen: 15.38 mg/L
Other:
Flow: CFS

| TEST: Alkalinity, Total | | METHOD: EPA 310.2 | | | | |
|-------------------------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Alkalinity | 12 | mg/L | 3.8 | 10 | M Chen | 12/22/2009 |

| TEST: Hardness, Calcium | | METHOD: SM 3500-Ca D | | | | |
|-------------------------|--------|----------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Calcium hardness | 12 | mg/L | 0.7 | 1 | M Chen | 12/21/2009 |

| TEST: Residue, Settleable | | METHOD: SM 2540F | | | | |
|---------------------------|--------|------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Settleable Residue | U | ml/L | 0.10 | 0.10 | P Leathers | 12/16/2009 |

| TEST: Residue, Suspended | | METHOD: SM 2540D | | | | |
|--------------------------|--------|------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Suspended Solids | 25 | mg/L | 10 | 10 | A Peebles | 12/18/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00003211004
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA ash spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 12/15/2009 10:26
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.08 pH Units
Chlorine, residual:
Conductivity: 34 uMHO
Temperature: 7.95
Dissolved Oxygen: 15.14 mg/L
Other:
Flow: CFS

| TEST: Alkalinity, Total | | METHOD: EPA 310.2 | | | | |
|-------------------------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Alkalinity | 11 | mg/L | 3.8 | 10 | M Chen | 12/22/2009 |

| TEST: Hardness, Calcium | | METHOD: SM 3500-Ca D | | | | |
|-------------------------|--------|----------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Calcium hardness | 12 | mg/L | 0.7 | 1 | M Chen | 12/21/2009 |

| TEST: Residue, Settleable | | METHOD: SM 2540F | | | | |
|---------------------------|--------|------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Settleable Residue | U | ml/L | 0.10 | 0.10 | P Leathers | 12/16/2009 |

| TEST: Residue, Suspended | | METHOD: SM 2540D | | | | |
|--------------------------|--------|------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Suspended Solids | 27 | mg/L | 10 | 10 | A Peebles | 12/18/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00003211005
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 2.3
Sampler Project Name: TVA ash spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 12/15/2009 10:44
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.58 pH Units
Chlorine, residual:
Conductivity: 146 uMHO
Temperature: 9.16
Dissolved Oxygen: 12.91 mg/L
Other:
Flow: CFS

| TEST: Alkalinity, Total | | METHOD: EPA 310.2 | | | | |
|-------------------------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Alkalinity | 77 | mg/L | 3.8 | 10 | M Chen | 12/22/2009 |

| TEST: Hardness, Calcium | | METHOD: SM 3500-Ca D | | | | |
|-------------------------|--------|----------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Calcium hardness | 60 | mg/L | 0.7 | 1 | M Chen | 12/21/2009 |

| TEST: Residue, Settleable | | METHOD: SM 2540F | | | | |
|---------------------------|--------|------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Settleable Residue | U | ml/L | 0.10 | 0.10 | P Leathers | 12/16/2009 |

| TEST: Residue, Suspended | | METHOD: SM 2540D | | | | |
|--------------------------|--------|------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Suspended Solids | 24 | mg/L | 10 | 10 | A Peebles | 12/18/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00003211006
Project Name: TVA-Ash Spill
Sample Description: Clinch River TVA Discharge Point
Sampler Project Name: TVA ash spill
Project Site No.: 5A
Station No.: KingAshOutF2
Date/Time Collected: 12/15/2009 10:50
Sampler's Name: Brandy Long
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date: 12/31/2009
Date/Time Received: 12/15/2009 14:00
Received By: Ken Hitchman

Field Determinations
pH: 7.68 pH Units
Chlorine, residual:
Conductivity: 47 uMHO
Temperature: 6.83
Dissolved Oxygen: 16.79 mg/L
Other:
Flow: CFS

| TEST: Alkalinity, Total | | METHOD: EPA 310.2 | | | | |
|-------------------------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Alkalinity | 14 | mg/L | 3.8 | 10 | M Chen | 12/22/2009 |

| TEST: Hardness, Calcium | | METHOD: SM 3500-Ca D | | | | |
|-------------------------|--------|----------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Calcium hardness | 18 | mg/L | 0.7 | 1 | M Chen | 12/21/2009 |

| TEST: Residue, Settleable | | METHOD: SM 2540F | | | | |
|---------------------------|--------|------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Settleable Residue | U | ml/L | 0.10 | 0.10 | P Leathers | 12/16/2009 |

| TEST: Residue, Suspended | | METHOD: SM 2540D | | | | |
|--------------------------|--------|------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Suspended Solids | 17 | mg/L | 10 | 10 | A Peebles | 12/18/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

| | | | |
|------------------------------|---|-----------------------------|--------------------|
| Lab-Sample Number: | K00003211007 | Field Determinations | |
| Project Name: | TVA-Ash Spill | pH: | 7.64 pH Units |
| Sample Description: | Clinch River mile 4.5 near Sugar Grove Valley R | Chlorine, residual: | |
| Sampler Project Name: | TVA ash spill | Conductivity: | 182 uMHO |
| Project Site No.: | 6 | Temperature: | 9.68 |
| Station No.: | CLINC004.5RO | Dissolved Oxygen: | 12.25 mg/L |
| Date/Time Collected: | 12/15/2009 10:33 | Other: | |
| Sampler's Name: | Brandy Long | Flow: | CFS |
| County: | ROANE - 73 | | |
| Sample Matrix: | Water | | |
| EFO: | Knoxville | | |
| Sampling Agency: | TDEC-WPC | | |
| Billing Code: | 327.34-20 | | |
| Send Report To: | TDEC-WPC | | |
| Agency Invoiced: | TDEC-WPC | | |
| Priority Date: | 12/31/2009 | | |
| Date/Time Received: | 12/15/2009 14:00 | | |
| Received By: | Ken Hitchman | | |

| TEST: Alkalinity, Total | | METHOD: EPA 310.2 | | | | |
|-------------------------|--------|-------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Alkalinity | 100 | mg/L | 3.8 | 10 | M Chen | 12/22/2009 |

| TEST: Hardness, Calcium | | METHOD: SM 3500-Ca D | | | | |
|-------------------------|--------|----------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Calcium hardness | 78 | mg/L | 0.7 | 1 | M Chen | 12/21/2009 |

| TEST: Residue, Settleable | | METHOD: SM 2540F | | | | |
|---------------------------|--------|------------------|------|------|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Settleable Residue | U | ml/L | 0.10 | 0.10 | P Leathers | 12/16/2009 |

| TEST: Residue, Suspended | | METHOD: SM 2540D | | | | |
|--------------------------|--------|------------------|-----|-----|--------------|------------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Suspended Solids | U | mg/L | 10 | 10 | A Peebles | 12/18/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected